BEFORE THE WAIMAKARIRI DISTRICT PLAN REVIEW HEARINGS PANEL

IN THE MATTER OF	the Resource Management Act 1991
AND	
IN THE MATTER OF	the hearing of submissions and further submissions on the Proposed Waimakariri District Plan
AND	hearing of submissions and further submissions on Variations 1 and 2 to the Proposed Waimakariri District Plan
	Hearing Stream 12E: Rezoning Requests

FIRST STATEMENT OF EVIDENCE OF STUART JOHN FORD (PRODUCTIVITY AND THE NPS-HPL) FOR RICHARD AND GEOFF SPARK (PDP SUBMITTER 183 / VARIATION 1 SUBMITTER 61)

Dated 4 March 2024

Aston Consultants Limited
Resource Management and Planning
PO Box 1435
Christchurch

Attention: Fiona Aston
Phone: 0275 332213
Email: fiona@astonconsultants.co.nz

Counsel instructed:
David Caldwell, Barrister
Bridgeside Chambers
PO Box 3180
Christchurch

Phone: 021 221 4113
Email: dcc@bridgeside.co.nz

Introduction, Qualifications and Experience

1. My full name is Stuart John Ford.

2. I am a Director of The AgriBusiness Group and work as an agricultural and resource economist based in Christchurch. I have a Diploma in Agriculture and a Bachelor of Agricultural Commerce from Lincoln University and have undertaken post graduate studies in Agricultural and Resource Economics at Massey University.

3. I am a member of the New Zealand Agriculture and Resource Economics Society and the Australia Agriculture and Resource Economics Society. I am also a member of the New Zealand Institute of Primary Industry Management.

4. I have spent over thirty years as a consultant in the primary industries, with the last twenty five years specialising in agricultural and resource economics and business analysis.

5. I have given evidence to District and Regional Council hearings, Special Tribunals to consider Conservation Orders and the Environment Court in my capacity as an agricultural and resources economist.

6. In my professional role I have undertaken work relating to the NPS and particularly the applicable criteria to exempt land from compliance with the NPS-HPL for both the applicants and as a professional peer reviewer for Councils.

7. This experience includes:

    (a) Evidence given on behalf of Auckland Council to the Environment Court in relation to the appeal of the Self Family Trust in regard to a land zoning decision on elite soils.

    (b) Support for Auckland Council in preparing a Section 42A report on a development proposal at Patumahoe South in relation to the productivity of the land.

    (c) Support for Auckland Council in preparing a Section 42A report on a development proposal at O'Hara Waiuku in relation to the productivity of the land this has subsequently been appealed to the Environment Court.

    (d) Provision of evidence to the Environment Court on the productive potential of the land known as Sticky Forest adjacent to Wanaka.

    (e) Provision of evidence to the Environment Court on the commercial viability of Rangitane River Park - Kerikeri.

(f) Support for the Waimakariri District Council in preparing a Section 42A report on a development proposal at Ohoka in relation to the productivity and the commercial viability of land.

(g) Support for the Ashburton, Timaru and the Waikato Councils as a peer reviewer of NPS-HPL applications.

(h) Preparation of reports for various applicants in Auckland, Waikato, Bay of Plenty, Wellington, Waimakariri, Christchurch City, Selwyn, Timaru and Dunedin Councils.

Code of Conduct

8. I have read the Code of Conduct for Expert Witnesses (contained in the Environment Court Practice Note 2023) and I agree to comply with it. Except where I state that I rely on the evidence of another person, I confirm that the issues addressed in this statement of evidence are within my area of expertise, and I have not omitted to consider material facts known to me that might alter or detract from my expressed opinions.

Scope of Evidence

9. I have been asked to provide evidence in relation to a productivity assessment and comment on the impact of the NPS-HPL relating to the submitter's proposed rezonings, and particularly for the area south of Boys Road. I have not been asked to provide evidence in relation to the area north of Boys Road which I understand is identified as an FUDA.

10. In preparing my evidence I have reviewed the following documents:

(a) MFE (2022): National Policy Statement for Highly Productive Land 2022.

(b) MFE (2023): National Policy Statement for Highly Productive Land. Guide to Implementation.

(c) Landcare Research: Ourenvironment online mapping tool. IRI-LUC-HPL: https://ourenvironment.scinfo.org.nz/maps-and-tools/app/Land Capability/Iri_luc_hpl

(d) Landcare Research SMap online tool: https://smap.landcareresearch.co.nz/maps-and-tools/app/

(e) Drafts of the evidence of Mr Thomson and Mr Colegrave.

11. My evidence relates to my report “Productivity Assessment and comment on the impact of the NPS-HPL on the land between Boys and Marsh Roads, Rangiora” which is attached to this evidence as Appendix A.

12. I am familiar with the site and the location. I have discussed with Mr Geoff Spark matters relating to the existing farm management and difficulties arising from the Rangiora Eastern Link (REL). From those discussions, I understand that it is intended, should the rezoning sought by approved, that the remaining area of approximately 140 ha of the existing farm will remain, essentially, in its current use as a productive dairy farm and as such will retain its productive capacity.

SUMMARY OF MY REPORT

13. To the immediate North and West of the site (approximately 30 ha) there is intensive urban development, to the South there is the Rangiora effluent ponds and then pastoral grazing land while to the East there is intensive pastoral grazing land with the majority of it being dairy land. The site is currently incorporated into the Sparks existing dairy farm. I understand, from discussions with Mr Spark, that this block will be isolated, and effectively land locked from, other primary production land by the Rangiora Eastern Link Road once construction begins on that section.

14. The Temuka soils, which make up 50% of the site, are deep, stoneless silts over clay which are poorly drained with a high Profile Available Water (PAW). The Flaxton soils, which make up 30% of the site are moderately deep stoneless silts which are poorly drained with a high PAW. The Kaiapoi soils are deep, stoneless silts which are imperfectly drained and have a high PAW. The Paynter soils are a deep, stoneless peat over clay with a rooting depth which is limited to 50 – 100 cm which are very poorly drained with a high PAW.

15. These soils are theoretically suitable, subject to drainage, for reasonably intensive arable and pastoral land uses.

16. All of the site is classified as LUC 3. In the NPS-HPL all land which is classified as LUC 1, 2 and 3 is automatically considered to be highly productive land (HPL) unless certain exclusions apply. I understand these exclusions will be covered in Mr Thomson’s planning evidence.

17. There are several limiting factors (‘constraints’) that affect the productive value of the site for primary production. The constraints on the site have been evaluated as:

    (a) The potential for intensive horticultural land use is limited by:

(i) The very high cost of establishment of an intensive horticultural operation on a relatively small site.

(ii) The relatively poor drainage of the site effectively precludes any high intensity horticultural land uses.

(iii) The cold winters limit the potential range of horticultural crops.

(iv) The site is remote from any post harvest packaging and processing facilities which would add large additional growing costs.

(v) The potential for reverse sensitivity from neighbours that are situated in a lifestyle area would mean that investors in horticultural activities are most likely to seek alternative production areas where there isn't the threat of reverse sensitivity becoming a production issue.

(b) The relatively small area available would negate the ability to carry out an effective crop rotation for an arable growing operation. The block of land would have to be incorporated into a bigger growing operation in order to achieve sufficient scale to enable the landowner to maximise productivity. As there aren't any arable cropping farms in close proximity it would be unattractive for an arable farmer to incorporate the site into their larger farming operation because of the difficulty and inconvenience of transporting the necessary large machinery through a highly built up area with large traffic flows to farm what is an insignificant area of land.

(c) The property is surrounded by urban development on two sides. With construction of the REL it will essentially be blocked from being incorporated into a larger pastoral farming operation because of its situation being to the west of the Eastern Link road. It is my opinion that the site would not be an attractive option for a farmer to take it up to add to other productive land because of its size and location.

18. It is my opinion that, given the constraints on land use, the highest and best land use of the site is 'Irrigated Dairy Support' as represented by heifer grazing.

19. If the whole 30 ha was available for production, the financial performance could be as shown in **Table 1**.

Table 1: Financial performance of Dairy Support ($/ha)

	Dairy Support
Gross Farm Revenue	115,800
Farm Operating Expenses	63,780
Earnings Before Interest and Tax	51,990

20. Calculating the amount that would be required to provide sufficient income for the site to be considered economically viable, is very subjective. If I were to provide a sense check by providing for a return for management of 1.5% of the Gross Revenue and Interest payments on 40 percent of the capital value of the property at 7%, the total Earnings Before Interest and Tax required in order to consider that the amount generated would be sufficient would be $73,137 which is $21,147, or 40%, more than the amount which is actually able to be generated. Note that there would be no tax to pay as the net taxation position of the site under the assumptions made would be a $21,147 loss.

21. It is my opinion that pastoral land use that could operate on 30 ha of the site is unable to provide sufficient income to provide for interest, taxation and a return for management as a stand-alone unit. Therefore, I conclude that the 30 ha of HPL is a site which is unable to be considered as commercially viable.

22. I note that there is potential for the total area of the site to increase by 5 ha to be 35ha. If that were to occur it would not change my conclusion as all this change in area would do would be to change the proportion of the deficit achieved.

23. In Table 2 I have shown the financial performance of the B+LNZ's[1] representative model on a per ha basis and the assumed financial performance of the site if it was in 4 ha lots.

Table 2: Financial performance of the site if it were in 4 ha blocks.

	Financial returns from the B+LNZ model. $/ha	Financial returns from the site if it were in 4 ha lifestyle blocks.
Gross Farm Revenue	1,907	28,605
Farm Operating Expenses	1,260	18,900
Earnings Before Interest and Tax	646	9,690

[1] Beef and Lamb NZ's (B+LNZ) farm monitoring representative model Class 6 Canterbury / Marlborough finishing and breeding model. It represents performance of a dryland model within a 650 mm rainfall area.

24. What we can see from Table 2 is that the Gross Revenue from the site, if it were subdivided into 4 ha blocks, is modest at approximately $29,000 and the EBIT is not significant at approximately $10,000.

25. If the site was considered under Clause 3.6 of the NPS-HPL the direct opportunity cost of the loss of income off the site[2] is $715,000 if the site is 30ha and $133 k if it is as proposed in the PWDP at 4ha lots.

26. If it were considered under Clause 3.10 it is our opinion that the use of HPL for primary production on the site is not able to be economically viable for at least 30 years and that the net environmental, social and economic impacts are positive.

27. It is my conclusion that the proposed rezoning of the site to enable residential development meets all of the limbs in the clause 3.10 (1) test and by satisfying the requirements of 3.10 (2). The permanent or long-term constraints on economic viability cannot be addressed through any reasonably practicable options that would retain the productive capacity of the highly productive land. Therefore, in my opinion the Waimakariri District Council can be satisfied that the HPL on this site can be subdivided, used, or developed for activities not otherwise enabled under clauses 3.7, 3.8, or 3.9 of the NPS-HPL.

Stuart Ford
4 March 2024

[2] We have assessed the economic cost of the loss of the site from the production off it as the discounted cash flow of the Earnings Before Interest and Tax (EBIT) of the earnings from the site over 30 years which have been discounted at 6%.

Appendix A:

Productivity Assessment and comment on the impact of the NPS-HPL on the land between Boys and Marsh Roads, Rangiora

Productivity Assessment and comment on the impact of the NPS-HPL on the land between Boys and Marsh Roads, Rangiora.

Background

Stuart Ford of The AgriBusiness Group (TAG) has been asked by Richard and Geoff Spark to prepare an Agricultural Productivity and Commercial viability report including evidence on relevant matters in the National Policy Statement for Highly Productive Land (NPS-HPL) on approximately 30 ha of land which is situated between Boys and Marsh Roads, Rangiora.

Richard and Geoff Spark have lodged a submission on the Proposed Waimakariri District Plan (PWDP) to rezone all that land (appx 30ha) to the west of the proposed Eastern Link from Rural Lifestyle Zone (RLZ) to General Residential and Medium Density in the vicinity of Boys and Marsh Road Rangiora, colored in blue on **Figure 1**.

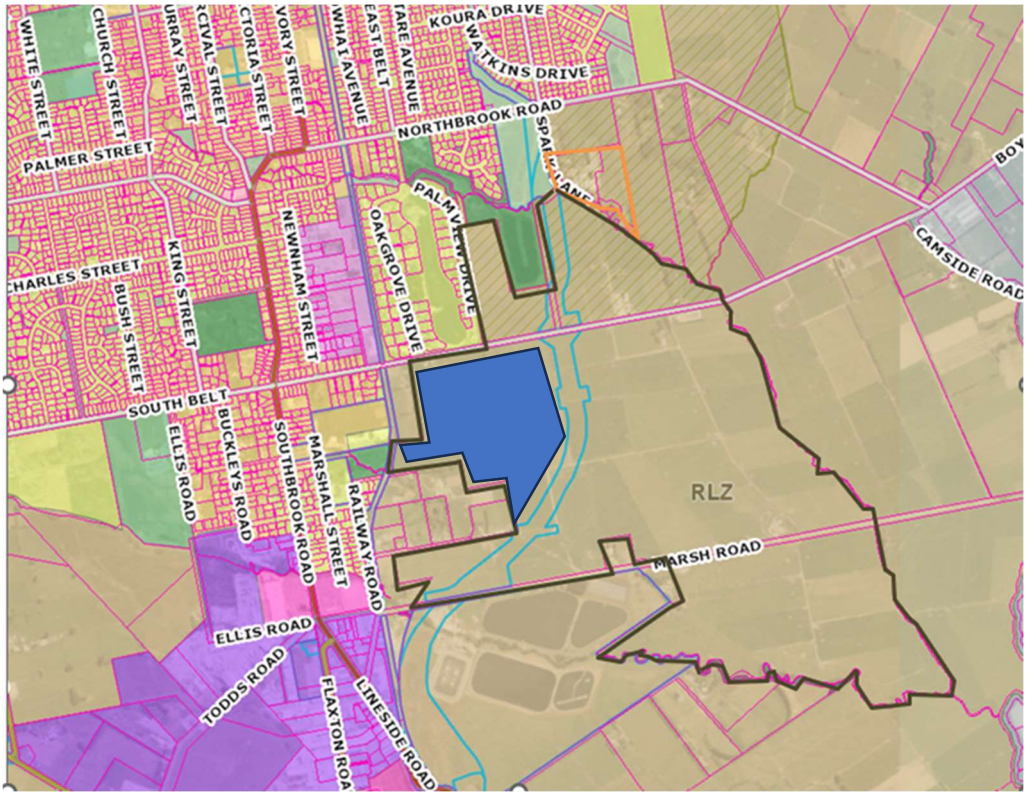

Figure 1: Area of land on G & S Sparks property (Navy Blue) that this submission is subject to. Note the proposed Eastern Bypass is shown in light blue outline to the east of the site.

In the PWDP the site is zoned as Rural Lifestyle Zone which allows the site to be subdivided down to 4 ha blocks. As such it is not subject to the National Policy statement on Highly Productive Land (NPS-HPL) if the current proposed zoning is confirmed.

The site is currently incorporated into the Sparks existing dairy farm but it is proposed that it be isolated and effectively land locked from other primary production pieces of land by the Eastern Link Road.

I understand that consideration of the NPS-HPL is only relevant to the 30 ha site, as the balance of the Sparks land can still be considered as a fully functioning and economically viable dairy farm and so it is still regarded as Highly Productive Land.

Description of the site

The location and surrounds of the site (approximate boundaries highlighted in red), are shown in **Figure 2**. To the immediate North and West of the site there is intensive urban development which constitutes the town of Rangiora, to the South there is the Rangiora effluent ponds and then pastoral grazing land while to the East there is an area of lifestyle blocks and then the settlement of Tuahiwi and the Town of Woodend.

Figure 2: Map of the approximate site showing the neighboring land uses (Google Earth)

Productivity

The productivity of the site is determined by a number of factors including the nature of the soils, the climate and the scale of the operation. The viability[3] of the site is determined by the ability of the site to return profits from the farming of the site to offer the owners a sufficient return.

Soils

The soil types present in the vicinity of the site are as shown in Figure 3. The area shown in Table 1 is larger than the area of the site because the mapping units are based on the titles which are larger than the intended area of the site. Although the main soil type is recorded on SMap as Temuka the soils are in fact a mix of four different soils as listed in Table 2.

[3] We use the definition for viability that is used in the Cambridge dictionary which is "*the ability of a business, product, or service to compete effectively and to make a profit*".

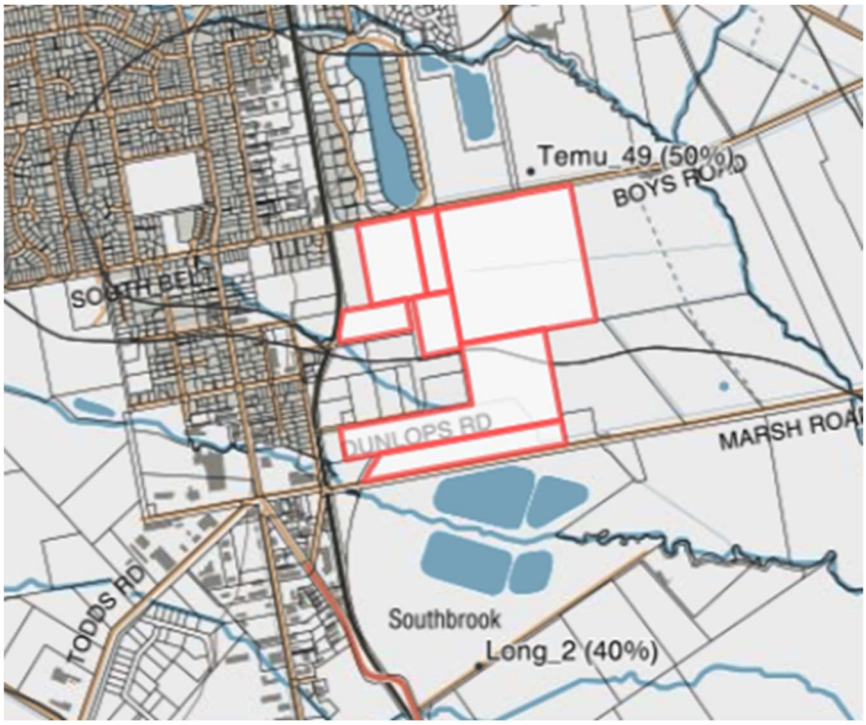

Figure 3: Soil types on the vicinity of the site as shown on SMap[4].

Table 1: Soil types as a proportion of the total present on the site.

Soil	Proportion (%)
Temuka	50
Flaxton	30
Kaiapoi	10
Paynter	10

Definitions of the key soil physical properties that are listed in the SMap fact sheets reports[5] for the soils present on the site are shown in **Table** 2.

Table 2: Physical properties of the soil types as listed in SMap fact sheets.

Soil Name	Temuka	Flaxton	Kaiapoi	Paynter
SMap Name	Temu_49a.1	Flax_2a.1	Kaia_1a.1	Payn_6a.1
Depth Class	Deep > 1m	Moderately deep (45 - 90 cm)	Deep > 1m	Deep > 1m
Rooting Depth	Unlimited	Unlimited	Unlimited	50 - 100 (cm)
Depth to stony layer	No significant stony layer within 1 m	No significant stony layer within 1 m	No significant stony layer within 1 m	No significant stony layer within 1 m

[4] https://smap.landcareresearch.co.nz/maps-and-tools/app/
[5] https://smap.landcareresearch.co.nz/maps-and-tools/factsheets/

Texture Profile	Silt over clay	Silt	Silt	Peat over clay
Topsoil stoniness	Stoneless	Stoneless	Stoneless	Stoneless
Drainage class	Poorly drained	Poorly drained	Imperfectly drained	Very poorly drained.
Profile Available Water (0 to 100 cm)	High 176 mm	High 173 mm	High 213 mm	High 224 mm

The Temuka soils, which make up 50% of the area are deep, stoneless silts over clay which are poorly drained with a high Profile Available Water (PAW). The Flaxton soils, which make up 30% of the area are moderately deep stoneless silts which are poorly drained with a high PAW. The Kaiapoi soils are deep, stoneless silts which are imperfectly drained and have a high PAW. The Paynter soils are a deep, stoneless peat over clay with a rooting depth which is limited to 50 – 100 cm which are very poorly drained with a high PAW.

These soils are theoretically suitable, subject to drainage, for reasonably intensive arable and pastoral land uses.

Land Use Capability (LUC)

The data which is available on LUC in the New Zealand Land Resources Inventory Series (LRIS) portal is mapped at the 1:50,000 level and it is shown in Figure 4. Although the accuracy of an assessment of the LUC which is displayed at this level is likely to change when it is mapped at a finer scale, we are of the opinion that the information on the LUC as shown in Figure 4, which matches very closely the soil types, is a fair representation of the LUC classes that are present on the subject land.

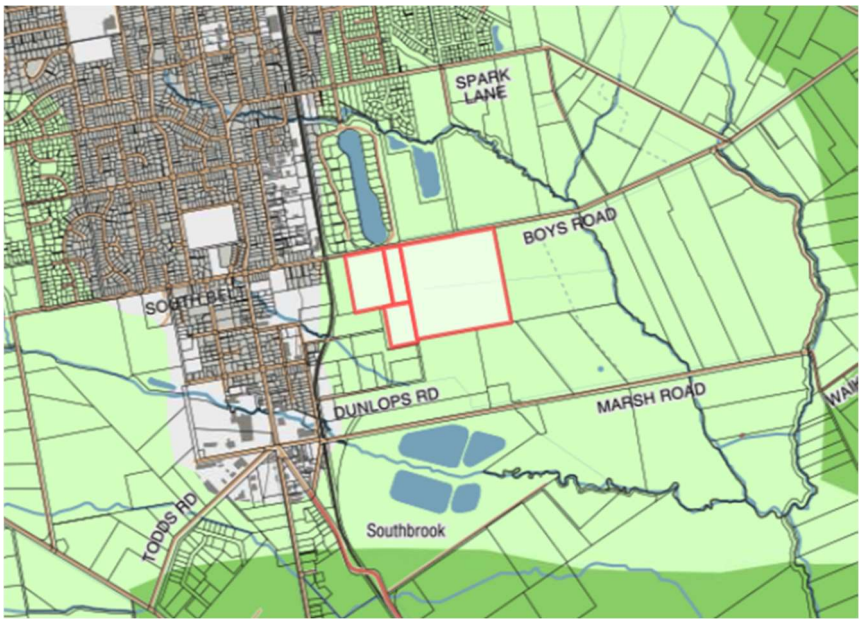

Figure 4: LUC classes of the subject land. Light green is Class 3.

What we can determine from Figure 4 is that all of the site is classified as LUC 3.

In the NPS-HPL all land which is classified as LUC 1, 2 and 3 is automatically considered to be highly productive land (HPL).

Land use potential.

It is our opinion that on the approximately 30 ha of the site that is HPL a range of arable and pastoral landuse, is theoretically possible.

Land Use Constraints.

Exclusion of Horticulture

The potential for intensive horticultural land use has been considered and it has been rejected for a number of important reasons including:

- The very high cost of establishment of an intensive horticultural operation on a relatively small site.
- The relatively poor drainage of the site effectively precludes any high intensity horticultural land uses.
- The cold winters limit the potential range of horticultural crops.
- The site is remote from any post harvest packaging and processing facilities which would add large additional growing costs.
- The potential for reverse sensitivity from neighbours that are situated in a lifestyle area would mean that investors in horticultural activities are most likely to seek alternative production areas where there isn't the threat of reverse sensitivity becoming a production issue.

Limitation of Arable Land Use

The ability to maximise the productivity of any of the potential arable land uses would require that the land was farmed as part of a larger farming entity and that irrigation capability was available (it is currently not available). There is also the necessary consideration of the potential for reverse sensitivity to any more intensive land uses than pastoral from the neighbouring landowners.

The relatively small area available would negate the ability to carry out an effective crop rotation for an arable growing operation. The block of land would have to be incorporated into a bigger arable farm in order to achieve sufficient scale to enable the landowner to maximise productivity. As there aren't any arable cropping farms in close proximity it would be unattractive for an arable farmer to incorporate the site into their larger farming operation because of the difficulty and inconvenience of transporting the necessary large machinery through a highly built up area with large traffic flows to farm what is an insignificant area of land.

Pastoral land uses are limited in their scope.

The opportunity to continue the existing use of dairy farming on the land is constrained by the Eastern Link Road effectively cutting of the ability to move dairy animals to and from the cow shed, which during the milking season is a twice a day occurrence, and the cattle yards and to move large tractors and silage making and feeding out equipment between the two blocks.

While it is theoretically possible to construct an underpass there are a number of factors which diminish the possibility of that happening including the relatively high water table meaning that there is the risk of flooding which would mean that the cost of providing the underpass would be prohibitive.

It would be theoretically possible for the land to be used for pastoral grazing (sheep and beef and dairy support) however there are a number of significant constraints on that land use being achieved. The constraints include:

- the scale of the site being too small to offer a prospective farmer any real advantage in farming the site,
- the costs associated with intensifying the productivity of the site e.g. providing for winter crops, providing additional supplementary feed from off site are all too expensive to be justified on such a small scale,

The property is surrounded by urban development on two sides and is essentially blocked from being incorporated into a larger pastoral farming operation because of its situation being to the east of the Eastern Link road. It is my opinion that the site would not be an attractive option for a farmer to take it up to add to other productive land because of its size and location.

The potential for reverse sensitivity from neighbours of the site is high to any more intensive land uses being practiced than that of the current lifestyle block practice which is pastoral.

It is my opinion that the highest and best land use would be for dairy support pastoral grazing.

Viability

As a 30 ha block.

It is my opinion that given the constraints on land use, the highest and best land use of the site is 'Irrigated Dairy Support' as represented by heifer grazing. In choosing irrigation capability I have assumed that access to the existing irrigation source would be maintained by the provision of piping under the road.

In order to assess the commercial viability of the site, I have assumed that this land use is able to be managed across the whole 30 ha of the site.

For the dairy support model, I have used TAG's Dairy Support model which has been altered to reflect the stocking rate, prices paid and costs of farming in the Canterbury Region.

The key financial metrics of this model are shown in Table 3. The Earnings Before Interest and Tax (EBIT) measure shows the amount of surplus which is generated which is available to pay interest incurred in operating, taxation to be paid and an additional sum which rewards the management of the property.

Table 3: Key financial metrics of Dairy Support representative model ($ / ha)

	Dairy Support
Gross Farm Revenue	3,860
Farm Operating Expenses	2,126
Earnings Before Interest and Tax	1,733

If the whole 30 ha was available for production, the financial performance could be as shown in Table 4.

Table 4 Financial performance of Dairy Support ($/ha)

	Dairy Support
Gross Farm Revenue	115,800
Farm Operating Expenses	63,780
Earnings Before Interest and Tax	51,990

Calculating the amount that would be required to provide sufficient income for to consider that the site would be economically viable is very subjective. If I were to provide a sense check by providing for a return for management of 1.5% of the Gross Revenue and Interest payments on 40 percent of the capital value of the property at 7%, the total Earnings Before Interest and Tax required in order to consider that the amount generated would be sufficient would be $73,137 which is $21,147, or 40%, more than the amount which is actually able to be generated. Note that there would be no tax to pay as the net taxation position of the site under the assumptions made would be a $21,147 loss.

It is our opinion that pastoral land use that could operate on 30 ha of the site is unable to provide sufficient income to provide for interest, taxation and a return for management as a stand-alone unit. Therefore, we conclude that the 30 ha of HPL is a site which is unable to be considered as commercially viable.

I note that there is potential for the total area of the site to increase by 5 ha to be 35ha. If that were to occur it would not change my conclusion as all this change in area would do would be to change the proportion of the deficit achieved.

As the proposed 4 ha.

Under the PWDP the site is proposed to be zoned as RLZ which allows a developer to subdivide down to 4 ha.

Throughout my career I have always been of the opinion that rural lifestyle land is best incorporated into any economic analysis at half the productive capacity and economic performance of what it would be analysed as a full economic farm. While I don't have any research results to back up this assumption, I believe that it satisfactorily accounts for those lifestyle dwellers that do so because of that ability to live in significant separation from their neighbours and gives them the ability to carry out leisure activities on their land which aren't connected to traditional rural production systems and those that are interested in maximising the rural production from their land.

It is my impression that the former rural lifestylers far exceed the number of the latter. I am of the opinion for this exercise this assumption is generous in the assumption of the productive output.

It would not be possible to irrigate the site if it was in 4 ha blocks.

In the consented scenario, given the soil types that are on the land I am of the opinion that its highest and best use is dryland sheep and beef farming.

The sheep and beef model that I have used to create the financial performance of the site is the Beef and Lamb NZ's (B+LNZ) farm monitoring representative model Class 6 Canterbury / Marlborough finishing and breeding model. It represents performance of a dryland model within a 650 mm rainfall area.

I have assumed that it is appropriate to use this model over the whole 30 ha area. Which again is a generous assumption as a generous proportion of the land will be taken up by the house and grounds of the subdivision.

In Table 5 I have shown the financial performance of the B+LNZ's representative model on a per ha basis and the assumed financial performance of the site if it was in 4 ha lots.

Table 5: Financial performance of the site if it were in 4 ha blocks.

	Financial returns from the B+LNZ model. $/ha	Financial returns from the site if it were in 4 ha lifestyle blocks.
Gross Farm Revenue	1,907	28,605
Farm Operating Expenses	1,260	18,900
EBIT	646	9,690

What we can see from Table 5 is that the Gross Revenue from the site, if it were in its proposed consented form, is modest at approximately $29,000 and the EBIT is not significant at approximately $10,000.

Consideration of the NPS-HPL

We were asked to comment on relevant matters in the NPS-HPL given the productivity and viability findings in this report.

Clause 3.6 Restricting urban rezoning of highly productive land.

Clause 3.6 states:

(1) *Tier 1 and 2 territorial authorities may allow urban rezoning of highly productive land only if:*

(a) *the urban rezoning is required to provide sufficient development capacity to meet demand for housing or business land to give effect to the National Policy Statement on Urban Development 2020; and*

(b) *there are no other reasonably practicable and feasible options for providing at least sufficient development capacity within the same locality and market while achieving a well-functioning urban environment; and*

(c) *the environmental, social, cultural and economic benefits of rezoning outweigh the long-term environmental, social, cultural and economic costs associated with the loss of highly productive land for land-based primary production, taking into account both tangible and intangible values.*

The following information contributes to an assessment of (c) from a primary industry land use perspective.

Economic

We have assessed the economic cost of the loss of the site from the production off it as the discounted cash flow of the Earnings Before Interest and Tax (EBIT) of the earnings from the site over 30 years which have been discounted at 6%.

If the site was considered under Clause 3.6 of the NPS-HPL the direct opportunity cost of the loss of income off the site[6] is $715,000 if the site is 30ha and $133 k if it is as proposed in the PWDP at 4ha lots.

The loss of employment if taken from the same B+LNZ representative farm which has 1.5 employees is 0.12 of an employee.

Ther is the possibility that the loss of throughput from the processing industry will be negative for the District but it is such a small volume that it will not negatively affect either the processing companies nor their employees.

The majority of farm purchases are purchased from suppliers outside the District and so the loss of that activity will have a very small to negligible impact on the retailers.

Social

There will be a very minor negative social impact of the loss of productive activity in the rural sector but the impact of that will not be noticed in the community.

Environmental

There will be a positive benefit to the environment through a reduction in the emissions of Nitrogen, Phosphorous, e coli and greenhouse gasses because of the loss of farming activity.

Clause 3.10 Exemption for highly productive land subject to permanent or long-term constraints.

Clause 3.10 in the NPS-HPL Exemption for highly productive land subject to permanent or long-term constraints states that:

(1) Territorial authorities may only allow highly productive land to be subdivided, used, or developed for activities not otherwise enabled under clauses 3.7, 3.8, or 3.9 if satisfied that:

  (a) there are permanent or long-term constraints on the land that mean the use of the highly productive land for land-based primary production is not able to be economically viable for at least 30 years; and

  (b) the subdivision, use, or development:

[6] We have assessed the economic cost of the loss of the site from the production off it as the discounted cash flow of the Earnings Before Interest and Tax (EBIT) of the earnings from the site over 30 years which have been discounted at 6%.

(i) avoids any significant loss (either individually or cumulatively) of productive capacity of highly productive land in the district; and

(ii) avoids the fragmentation of large and geographically cohesive areas of highly productive land; and

(iii) avoids if possible, or otherwise mitigates, any potential reverse sensitivity effects on surrounding land-based primary production from the subdivision, use, or development; and

(c) the environmental, social, cultural and economic benefits of the subdivision, use, or development outweigh the long-term environmental, social, cultural and economic costs associated with the loss of highly productive land for land-based primary production, taking into account both tangible and intangible values.

(2) In order to satisfy a territorial authority as required by subclause (1)(a), an applicant must demonstrate that the permanent or long-term constraints on economic viability cannot be addressed through any reasonably practicable options that would retain the productive capacity of the highly productive land, by evaluating options such as (without limitation):

(a) alternate forms of land-based primary production:

(b) improved land-management strategies:

(c) alternative production strategies:

(d) water efficiency or storage methods:

(e) reallocation or transfer of water and nutrient allocations:

(f) boundary adjustments (including amalgamations):

(g) lease arrangements.

In relation to 1 (a), it is our opinion that the use of HPL for primary production on the site is not able to be economically viable for at least 30 years and that in coming to that conclusion we have evaluated the following reasonably practical options:

- The model that we have used to test the commercial viability of the block has used the highest and best possible land use option that have been derived because of factors including the lack of size, the fact that the land will be essentially land locked away from primary industry production and the large distances from farming operations which they could be combined with.
- The model used reflects the average performance of the representative model.

In relation to 1 (b) (i), we are of the opinion that the loss of 30 ha of HPL is not significant in the Canterbury Region which contains 824,286 ha of available HPL land[7].

In relation to 1(b) (ii), we are of the opinion that the proposal avoids the fragmentation of large and geographically cohesive areas of HPL because the site is effectively on the border between HPL and non HPL land and therefore the remaining HPL land will maintain its cohesive nature.

[7] Journeaux, P et al (2017): Analysis of drivers and barriers to land use change. A Report prepared for the Ministry for Primary Industries

In relation to 1(b) (iii), we are of the opinion that the proposal avoids any potential reverse sensitivity effects on surrounding land-based primary production from the land use outcome. This is mainly because the existing Dairy farm is effectively separated from the site by the Eastern Link road. Much of the surrounding land comprises intensive urban and rural residential blocks which means that the subdivision of this block of land would be unlikely to add to the potential or create any new reverse sensitivity issues.

In relation to 1(c): our assessment of the costs and benefits both tangible and non tangible of the proposal are shown in **Table 6**.

Table 6: Costs and benefits of the proposal.

Category	Costs	Benefits
Environmental		
Carbon sequestration		Positive
Support habitat	Insignificant change	
Water filtration		Insignificant change
Flood mitigation		Insignificant change
Nutrient		Positive
Climate regulation		Positive
Air and water quality	Insignificant change	
Biodiversity conservation	Insignificant change	
Social / Cultural		
Sense of belonging and place		More residents experiencing.
Social fabric		Improving
Food security	Insignificant change	
Spiritual value	Insignificant change	
Economic		
Income		Considerably Higher
Employment		Enhanced
Flow on impacts to the wider community		Enhanced

The net environmental impacts are positive because of a reduction in the two negative environmental impacts caused by land-based primary production which are nutrient loss to water and emissions of greenhouse gases.

There will be a positive change in the social impacts from the current land use because there will be more human activity on the site and more expenditure in the local area which will contribute to the vibrancy of the community.

The economic impact is positive because, as explained previously, the site's highest and best use for primary production is not commercially viable so effectively its transition to

another land use which is commercially viable will be a positive economic benefit of enhancement of both employment and flow on impacts.

As detailed above, it is my opinion that the costs associated with the loss of HPL will be limited because it is not economically viable to use the site for primary production. I have concluded that the net environmental, social and economic impacts of the proposed land use outweigh the costs of the loss of HPL.

It is our conclusion that the proposed rezoning of the site to enable residential development meets all of the limbs in the clause 3.10 (1) test and by satisfying the requirements of 3.10 (2) in that the permanent or long-term constraints on economic viability cannot be addressed through any reasonably practicable options that would retain the productive capacity of the highly productive land and therefore, Waimakariri District Council should be satisfied that this HPL can be subdivided, used, or developed for activities not otherwise enabled under clauses 3.7, 3.8, or 3.9 of the NPS-HPL.